

ABSTRACT

A bipolar electrosurgical instrument has opposable seal surfaces on its jaws for grasping and sealing vessels and vascular tissue. Inner and outer instrument members allow arcuate motion of the seal surfaces. An open lockbox provides a pivot with lateral support to maintain alignment of the lateral surfaces. Ratchets on the instrument members hold a constant closure force on the tissue during the seal process. A shank portion on each member is tuned to provide an appropriate spring force to hold the seal surfaces together. During surgery, the instrument can be used to grasp and clamp vascular tissue and apply bipolar electrosurgical current through the clamped tissue. In one embodiment, the seal surfaces are partially insulated to prevent a short circuit when the instrument jaws are closed together. In another embodiment, the seal surfaces are removably mounted on the jaws.